Educ Inf Technol (2014) 19:565–567
DOI 10.1007/s10639-014-9340-x

Editorial on Mobile and Panoramic Video in Education

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Published online: 9 July 2014

Educational video has been around since the beginning of the movie and TV era. The medium was seen as a potential method for delivering education. This development has continued into the Internet era. Many services provide educational videos for teachers and students and in higher education and Massive Open Online Courses (MOOCs). MOOCs rely on delivering short segments of lectures in video format. For example, Khan Academy, which delivers educational Science, Technology, Engineering, and Mathematics (STEM) content in video format, has become extremely popular.

However, video should not be seen only as a passive medium repeating the broadcast model–the same content from one to many. In contrast, user-generated video has been increasing in recent years. Mobile devices and web-based video tools have created the potential for new kinds of paradigms in education. User-generated video supports creativity and problem solving, and making a video is a learning process. These skills are among the 21st-century skills or key competence skills that are crucial in evolving societies.

In this issue, we try to understand the current situation of the use of mobile video in education. In many schools, teachers are uncertain about allowing students to use their own mobile devices in the classroom. It can be difficult to see where video can be applied. Creating videos is an example of a pedagogically meaningful use of mobile devices in the classroom.

Young people use many social media–based video services on the Internet during their free time. The use is mainly related to entertainment. Maria Loftus, Peter Tiernan, and Sebastian Cheriann discuss students' readiness to move from consumers to producers of digital video content. The authors claim that as an educators, we should transfer young people's video-related skills to school use. In a cross-cultural analysis, the authors conclude that students want to adopt video for school but need teacher support.

Anu Liljeström, Jorma Enkenberg, and Sinikka Pöllänen studied inquiry-driven learning and video storytelling. Video stories were seen as learning objects and were used to analyze to study the learning process and the ecosystem. The authors conclude

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that the learning process involving video storytelling helps students become active community members in the co-developed learning process.

Carmen Zahn, Norbert Schaeffeler, Katrin Elisabeth Giel, Daniel Wessel, Ansgar Thiel, Stephan Zipfel, and Friedrich W. Hesse investigate the use of video created by students in knowledge acquisition and the change in attitude concerning obesity stigmatization. The authors show that creating videos contribute to a deeper understanding of obesity and to a decrease in stigmatizing attitudes. The videos created by students reflect their own thinking. Videos shared on a social media site provide a channel for the students' own voices and thus contribute to the awareness of topics that students are interested in. In this article, the video work was guided by a teacher so that it was divided into different steps that supported a collaborative design and learning process. Teacher guidance was present during the learning process just as Lofus et al. suggested.

Michael Tan, Shu-Shing Lee, and David W. L. Hung focus on a more general problem related to the pedagogical use of digital storytelling and video for learning. The authors ask if storytelling is an optimal means for teaching different subjects at school. Tan et al. discuss digital storytelling at school through the concept edutainment (a story involving a narrative and an educational mission). Typically, as in many commercial movies, the story presents a character whose aim is to solve a certain problem with limited resources. Tan et al. did a pilot study in which they wanted to know if fifth-grade students could construct this type of story by themselves with educational content. The authors conclude that digital stories are suitable for knowledge structures that are horizontal or a higher-up concept in a hierarchy.

Although the previous papers discuss the use of video in the school context, the role of video may be even bigger outside school where informal and non-formal learning happens. Scott Carter, Matthew Cooper, John Adcock, and Stacy Branham discuss how-to videos, video tutorials that non-professionals create in their own context. An example of this type of video is a video tutorial for how to make a cheesecake. Carter et al. claim that it is important that the video-capturing tool supports the creation process in order to create pedagogically sound how-to videos. The authors also summarize results from their study that aimed to find the needs of the community that is creating how-to videos. Based on this study, the authors designed an HTML 5-based video annotation tool that can be used in creating and annotating how-to videos.

The last article discusses the use of panoramic video and the potential for learning. Panoramic video can be recorded on newer smart phones that have an add-on lens that records a 360-degree video image. The video can be viewed with special viewer software on the web. Panoramic video seems promising in that it provides the means to be in the middle of the event. Individual users can adjust the viewing angle according to their own preferences and can focus on different events captured by the camera. According to Multisilta, panoramic video has not yet been used much in education. However, there are a great potential in this technology to support the creation of immersive videos for learning.

Privacy is one of the questions associated with the use of Internet videos in schools. Is it ok that students appear on the videos and can be recognized? Should these videos be accessible by anyone, or should access be restricted to school use? Based on my discussions with teachers in the United States and Finland, services such as YouTube may be too open and contain too much entertainment material to be used at school. It

seems that there is a need for a specialized video platform for school use that would provide pedagogical support to the teacher and students and solves the privacy issues. In addition, the school culture must be adapted to accept new ways of working with students' own mobile devices. The school needs to open its gates to the outside world and face the challenges and the potential of video storytelling for learning.